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ABSTRACT

A survey of rural secondary school students examined the formation of adolescent occupational identity by identifying predictors of students' ideal jobs. Data were collected from 612 of the approximately 750 students in grades 7-12 in a rural Pennsylvania school district. Predictors of choice of ideal job, by descending influence, were gender, average grades, knowledge about a job and its opportunities, and father's occupation. However, these factors explained only 18.7 percent of variance in ideal job scores. Results confirm that American adolescents often have unrealistic occupational aspirations in that the job opportunities likely to be available to them do not match their expressed interests. More students in this study were enrolled in college preparatory programs than were likely to go to college and were therefore unlikely to meet their educational and occupational goals. Other findings were that students' expected salaries were much higher than the norm for the local labor market, female students identified less with traditional female occupations than they did 25-30 years ago, students from advantaged backgrounds aspired to higher-status jobs than those from disadvantaged homes, and academically talented students selected higher-status ideal jobs than did students with lower grades. Recommendations include initiating job awareness and exploration at an earlier age, providing data on labor market trends to all students, developing goal setting skills as part of the regular curriculum, requiring students to investigate characteristics of all major job categories, engaging students in experiential activities exploring job opportunities, and providing educational components to compensate for selective information delivery that results from socioeconomic conditions. Contains 27 references. (TD)

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PREDICTORS OF OCCUPATIONAL CHOICE AMONG RURAL YOUTH: IMPLICATIONS FOR CAREER EDUCATION AND DEVELOPMENT PROGRAMMING

ED 408 127

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Introduction

How a young person views the world of work and how he/she may fit into it affect preparation for entry into the labor market. This view forms from the complex interaction of many factors and can be described as the ideal and expected work role for the individual. Identification of determinants of this occupational identity would provide useful information for the planning and implementation of kindergarten through adult career education and development programs. This study examined occupational identity formation by identifying predictors of participating students' ideal jobs. It was part of a larger study designed to describe the factors which influence entry into and subsequent movement within the labor force (Conroy, 1996).

The rationale for linking labor mobility studies to futuristic education policy and programming is based on several key issues. Few jobs are being created that require low skills levels. In fact, most new jobs (60%) will actually require some level of technical training beyond high school (Gray, 1996; Daggett, 1995), linking the needs of the workforce to the educational system more than ever.

Models of successful training programs assume equal entry position and advancement potential, for both youth and adult participants. Many times the background factors related to gender, race, and other socialization, which should help shape an individualized training program, are ignored in favor of a generic program based on employer needs for specific skills. Counselors and instructors often assume that students, especially those that are disadvantaged, know more than they really do about jobs and careers, information taken for granted in their middle-class frame-of-reference (Heebner, 1995). Low self-confidence and expectations of others often lead to a lack of "cultural capital" (Claus, 1990), ultimately resulting in an inability to identify interests and use skills to find a satisfying job (Heebner, 1995).

Choices made by young people—what courses to take in high school, whether to attend college, what to study—affect who they are and what they do (Adelman, 1994). Making the wrong will reduce possibilities for job success

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and/or upward mobility over the life course (Topel & Ward, 1992) by limiting the career-line paths which emerge from initial job placement (Spilerman, 1977). This limitation impacts not only the evolution of earnings and status, but also the ability to network, maximize job satisfaction, and exercise voluntary job mobility.

Most career education and development programming focuses on job awareness and exploration activities. Historically, the belief has been that awareness provides information to initiate interest which can then be explored (Herr, 1972; Super & Bohn, 1970). Awareness activities typically occur prior to or during seventh and eighth grades, but exploration usually does not occur until ninth or tenth grades, and is almost exclusively offered to vocational students in the form of career and career-cluster rotations during the first year of vocational school attendance. Unfortunately, this approach is flawed in that it does not address career development needs of college preparatory students and it occurs too late in the educational process for the vocational students for whom it was designed. Many career education programs also ignore the factors which influence interest and choice, factors which exert their influence many years prior to enrollment in those programs.

All of the social, family, and personal experiences of an adolescent interact to form his/her image of a "future self." These images can be both positive and negative; they evolve from integration and evaluation of specific self-attributes and self-assessment of performance in various domains. In other words, adolescents tend to think about the future in terms of aspirations based on what they like to do, emerging from awareness of what they do well (Harter, 1990). Thus, adolescents form their occupational identities through complex interactions of background and environmental factors which merge with the political and social structures of the labor market.

Theoretical Framework

To be effective, career education programs must be broad-based, centered on experiential learning, and integrated into the total educational program. The individual student must participate in activities to discover his/her talents, relate those talents to the world of work, and refine them for successful use in employment. In fact, educational professionals have long believed that orientation to work and assistance in career choice may be more valid determinants of employment success than specific skills training (USDHEW, 1968).

The purpose of career education and development extends beyond the usual goal of helping individuals choose an occupation or a career. From a broad perspective, career education should result in meaningful and satisfying work for an individual. Career education programs should make realistic choices possible for students by increasing their base of knowledge on which to make decisions.

A critical component of the choice process for young people is how they view themselves—their identity—and the future selves into which they may evolve. Ultimately, the identity, through the decision-making process, works to control the entry portal and subsequent positions of an individual in the labor market. Research on vocational choice reveals that a child rapidly develops ideas about what he/she can do, likes to do, and what others expect him/her to do (Allum, 1993; Kerchoff, 1993; NYSED, 1991; Super & Bohn, 1970). These concepts change over time, evolving into considerations of opportunities, choices, and then reality. Reality considerations become more important to the decision-making process as the young person enters the labor market or some form of postsecondary training and begins initial implementation of his/her identity (Conroy, 1996).

Harter (1990) stated that an adolescent's sense of self and future self is based upon performance in domains where success is important. If this is true, grades earned in school should be predictors of job choice for students who aspire to professional jobs which require postsecondary education. Students who earn higher grades are more likely to be "tracked" into a college preparatory program at an early age; success in school becomes a large part of how they see themselves, and the progression to further education is a natural process.

Parents' education and occupations are indices of adolescent social class (Steinberg, 1989). Most research on social mobility utilizes father's occupation as a measure of socioeconomic status (Blau, 1992; Blau & Duncan, 1967), but evolution of vocational identity also depends upon early experiences with the family (Harter, 1990). Perceptions of career choices also shape individual personality, intimately related to self-concept. The higher socioeconomic family will provide a career frame-of-reference based on values and norms associated with the status of the family (father's occupation). Prior mobility research has shown that a son's occupation is highly correlated with the father's occupation (Blau, 1992; Blau & Duncan, 1967), but few studies have ever focused specifically on female occupational choice and destination as a function of parents' occupations.

Biblartz and Raftery (1993) found that sons in nonintact families identified with the mother's occupation which is likely to be service or clerical in nature. Individuals from nonintact families were less likely to be found in self-employment situations. In particular, the relationship between fathers' occupations and sons' work destinations was found to be reduced by 23% if the family structure was disrupted (Biblartz & Raftery, 1993). Unfortunately, Biblartz and Raftery also did not look at effects of family structure or disruption on the occupational choice and or destinations of females.

Attempts to counteract any negative effects of father's low status occupation or family disruption must, therefore, occur before the influence has

permanent effects. In fact, Tideman and Dudley (1967, cited in Herr, 1972) theorized that the school system or guidance methods can order the stages of career development and personal trends can be given new direction or even reversed (Herr, 1972, p. 61). It is unfortunate that, nearly 30 years later, little has been done to further these types of compensatory programs.

Mulkeen (1993) found that participation in activities, in itself, was not related to academic achievement, but the assumed leadership role was related. However, Mulkeen (1993) did determine that leadership activities are positively associated with the number of clubs and other activities in which a student participates. Seeing oneself in multiple roles in addition to the time management, social interaction, and general emotional and intellectual development which results from participation leads to increased self-esteem, and additional "possible selves." Since all input, positive and negative, contributes to identity development, participation in activities most likely provides positive reinforcement and inputs. In addition, this participation begins the formation of networks which are so crucial to social capital and, ultimately, human capital development.

If we lived in a perfect world, we could equalize these factors so that all youth could enter the labor market on an equal footing. In reality, we can only hope to provide each student with the best opportunity to maximize his/her potential by creating a good match between interests, abilities, and career choice through an informed decision-making process.

Methods and Procedures of the Study

The purpose of this study was to examine the formation of adolescent occupational identity through an identification of predictors of ideal jobs. This was accomplished through the development of a linear regression model to identify predictors of choice of ideal job.

The population for the study consisted of approximately 750 students enrolled in grades 7 through 12 in a rural Pennsylvania school district. Data, collected via survey developed by the researcher provided information about students' attitudes, beliefs, and thoughts about jobs and careers, their self-esteem, and their perceived levels of family communication. The survey instrument consisted of six parts:

1. student identification of ideal jobs and reasons for choice;
2. educational goals and aspirations;
3. demographic information;
4. a self-esteem inventory (Rosenberg, 1985);
5. family communications patterns inventory (Flanagan, 1995); and
6. assessment of workplace skills (V-TECS, 1992).

Prior to its use, the instrument was reviewed by a panel of experts with backgrounds in psychology, sociology, communications, and vocational education to assure content and face validity. In addition, the special education coordinator for the participating school district determined its appropriateness for use with special needs students. Data analyses reported in this paper is from several sections of the instrument.

Data Analysis

Participants wrote their ideal or "best jobs." A prestige rating for occupations developed by the National Opinion Research Center (NORC) was used to assign a numerical rating to each of the jobs listed by participants (Reiss, 1961). The ideal job prestige score was then used in a multivariate regression analysis as the dependent variable. The jobs were also recoded and collapsed into six categories for descriptive purposes.

Participants responded to 20 Likert-scaled items that represented factors associated with choosing a job. The Likert scale consisted of four choices ranging from "1" (Not Important) to "4" (Very Important). A factor analysis identified underlying constructs in the response patterns; two resulting factors were included in the set of independent variables. They represented how much importance students placed on stabilizing the home and family environment (Cronbach's alpha=.7234) and knowledge of a job and its opportunities (Cronbach's alpha=.7492). The other independent variables were: (1) participation in activities, (2) average grades, (3) gender, (4) family size, (5) parents' occupations, (6) parents' employment status, (7) self-esteem, (8) family structure, (9) parents' education, (10) family communications, and discussions about the future and jobs, and (11) grade level as a proxy for age)[1,2].

Appropriate tests determined there were no violations of assumptions of equal variances, normal distribution, independence, and linearity. Collinearity

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[1] Dummy variables were created for nominally scaled variables: (1) Dad in House - 1=yes, 2=no; (2) Father's Education Level - Five dummy variables created for the six identified categories; (3) Dad Employed - 1=yes, 0=no; (4) Gender - 1=male, 0=female; (5) Average Grades - 1=above average (A's and B's), 0=C's and below; (6) Mother's Education - Five dummy variables created for the six identified categories; (7) Mother Employed - 1=yes, 0=no.

[2] The following variables were intervally scaled: (1) Activity Participation - actual number of self-reported activities in which student regularly participates; (2) Father's Job - numerical prestige score from NORC survey analysis; (3) Family/Home Considerations - Scale created from means of statements included in this factor; (4) Job Knowledge - Scale created from means of statements included in this factor; (5) Encourage Autonomy - Scale created from means of statements included in this factor; (6) Positive Reinforcement - Scale created from means of statements included in this factor; (7) Job Discussions - Scale created from means of statements included in this factor; (8) Family Size - Actual number of persons living in household; (9) Grade Level - self-reported grade in school; (10) Mother's Job - numerical prestige score from NORC survey analysis; (11) Self-Esteem - Scale created from means of statements used to measure self-esteem and based on Rosenberg's (1965) Self-Esteem Inventory.

diagnostics revealed that significant linear relationships between the various independent variables were not of sufficient magnitude to distort the regression results.

Results of the Analysis

Data were collected from a total of 612[3] students which represented the total student population less 80 students enrolled in the "Skills Classes" (formerly classified as trainable mentally retarded), three students who refused to participate, and approximately 50 who were absent on the day of the assessment.

Characteristics of the Participants

Table 1 reveals that almost two-thirds of the females in the study were or were planning to be enrolled in the college preparatory curriculum as opposed to less than one-half of the males (62.6% vs. 48.5%). In general, more students selected the college preparatory curriculum as their current or planned area of study over a vocational curriculum[4] (56.0% vs. 44.0%) (Table 1).

Table 1. Program Enrollments by Gender

	Program		
Gender	College Prep	Vocational	TOTALS
		(N/Column%/Row%)	
Female	134	80	214
	(58.0)	(43.7)	(51.7)
	(62.6	(37.4)	(100.0)
Male	97	103	200
	(42.0)	(56.3)	(48.3)
	(48.5)	(51.5)	(100.0)
TOTAL	231	183	414*
	(100.0)	(100.0)	(100.0)
	(56.0)	(44.0)	(100.0)

*Total of 612 participants less missing values and those 7th-9th graders who are undecided.

[3] Some of the analyses have totals that equal less than 612 due to missing data.

[4] Students in the participating school district can elect to attend the area vocational-technical school or can enroll as a vocational student in an approved business education program conducted on-site at the home school.

Students indicated what they thought they would earn during their first year in their chosen ideal jobs. Males enrolled in the college preparatory curriculum had the highest mean expected salary while females in the vocational program had the lowest (Table 2).

Table 2. Mean Expected Beginning Salaries by Gender and Program of Enrollment

Program	Male	Female
College Preparatory	$42,866	$38,164
Vocational	$32,243	$26,664

A breakdown of the student average grades reveals that females and college preparatory students earn higher grades than males and vocational students. Based on their relative proportions in the general population, female students were over-represented[5] in the three highest grade categories[6]—*A's*, *A's and B's*, and *B's*. Males were under-represented in these categories and over-represented in the lower grade categories. College preparatory students were over-represented in the *A's* and *A's and B's* grades categories. Vocational program students were over-represented in the remaining categories, most notably in the *C's* and *C's and D's* categories.

A total of 106 students (17.3%) indicated that they did not participate, at least once per month, in any of the given school or community activities. Of the remaining 506 students, most participate in one or two activities per month (Table 3). The mean participation was 1.9 activities with both school and summer sports being the most popular activities for participants followed by church activities. Participation in the school band and community groups were the least frequently reported activities.

[5] Representation according to proportion of total population is a demographic technique used to examine relationships. In this situation, since females comprise 47.4% of the population, they would represent 47.4% of the distribution of grades in each category if all things were equal.
[6] Grade categories were (1) A's, (2) A's and B's, (3) B's, (4) B's and C's, (5) C's, (6) C's and D's, (7) D's, and (8) D's and below.

The most frequently reported family size was "4" (N=243, 40%). A total of 456 (74.5%) of respondents reported that they live with both their mother and father, while 156 (24.5%) indicated they live with only their mother.

Table 3. Level of Participation in School and Community Activities

Activity	N	% Total (N=506)
Band	97	19.2
Choir	135	26.7
Church	175	34.6
Community Groups	95	18.8
School Clubs	139	27.5
School Sports	289	57.1
Summer Sports	249	49.2

*Represents the 506 out of 612 total respondents who participate in at least one activity.

An examination of the frequency distribution for parents' educational levels reveals that participants' fathers and mothers are very similar in their highest levels of educational attainment. Fathers were slightly less educated in the sense that a smaller percentage of them had earned high school diplomas than the mothers (46.1% vs. 51.8%) and more fathers than mothers were in the "less than high school education" category (20.6% vs. 13.9%). Few parents, relative to the total of those in the study, were reported to have earned a 4-year college degree. A total of 56 fathers (9.9% of all fathers) and 70 mothers (12.0% of all mothers) earned a BS degree as reported by the participants.

The majority of both participants' mothers and fathers were employed (564 fathers and 489 mothers; 94.8% and 86.7%, respectively. Most fathers work in skilled and semi-skilled trades areas and labor and service jobs (70.4% combined). The highest percentage of mothers work in labor and service jobs (48.4%), with 19.1% holding clerical positions. Nearly 15% of the mothers are employed in professional occupations as compared to 9.4% of the fathers. This is directly due to the fact that 45 of the 53 mothers holding professional jobs are working either as teachers (N=25) or registered nurses (N=20), two typical female occupations.

Over 80% of the male participants (N=198) want to work in either professional jobs or skilled or semi-skilled trade areas. As might be expected, few males desire clerical occupations. Seventy percent (N=170) of the female

participants desire professional jobs with a much smaller percentage (9.4%, N=22) aspiring to either clerical or skilled trade jobs. The most revealing information presented by examining the reported ideal job is that 291 of the 473 respondents (61.5%) have ideal jobs which will require at least some level of postsecondary education; many require graduate degrees, special licensing, or certification (Table 4)[7].

Predictors of Ideal Job Choice

Ordinary Least Squares (OLS) regression identified the subset of variables that, for this population, were statistically significant predictors of ideal job choice. The subset of variables included in the final model were: (1) father's occupation, (2) having knowledge about a job and its opportunities, (3) gender, and (4) average earned grades (Table 5).

Table 4. Ideal Jobs as Reported by Participants

	Job Classification						
Gender	Profes-sional	Other White Collar	Cleri-cal	Semi/ Skill Trades	Labor/ Service	Farm	TOTAL
	N/(Row%)						
Male	121	9	4	77	16	13	240
	(50.4)	(3.8)	(1.7)	(32.1)	(6.7)	(5.4)	(50.7)
Female	170	7	22	22	11	1	233
	(70.0)	(3.0)	(9.4)	(9.4)	(4.7)	(0.4)	(49.3)
TOTALS	291	16	26	99	27	14	473*
	(61.5)	(3.4)	(5.5)	(20.9)	(5.7)	(3.0)	(100.0)

*Missing observations=139. No significant difference exists between respondents and those with missing data.

[7] Determined through an in-depth analysis of actual ideal job titles provided by participants.

Table 5. Final Regression Results of Predictors of Choice of Ideal Job

Source	DF	Sum of Squares	Mean Sum of Squares	F	p	R^2
Regression	27*	18177.0	699.1	6.3	.0000	.1867
Residual	585	63967.9	109.3			

Variable	B	Beta	T	p
Father's Job	.1265	.1181	3.52	.0033
Job Knowledge	2.7950	.1423	3.76	.0002
Gender	-6.4418	-.2721	6.99	.0000
Aver. Grades	6.5146	.1972	5.04	.0000
Constant		66.3032	9.591	.0000

*Mean substituted for missing values

Table 5 reveals that 18.7% (R^2=.1867)[8] of the variance in the ideal job scores is due to the combined linear effects of the independent variables in the model. An examination of the Beta weights reveals that gender is the most influential predictor in the model (-.2721) followed by average grades (.1972), knowledge about a job and its opportunities (.1423), and father's occupation (.1181).

A large portion of the variance in ideal job scores is unexplained by this model (81.3%). The instrument used in this study was able to capture many of the background factors which combine to form the adolescent's sense of who are what he/she may become in the world of work. However, other factors were not measured—race, intelligence, any recent or other important family migration, and any cohort effects. Race, in particular, is a strong factor in identity development (Hacker, 1992; Harter; 1990), but, as noted was not a factor due to the homogeneous nature of the community. In addition to these important variables, there was no way to measure the political and social structure of the labor market in this study, factors known to influence the entrance and movement of individuals and groups into the labor market (Tumin, 1953; David & Moore, 1945). The model, however, provides insight into the intersection of socioeconomic status and gender as they relate to adolescent development of a work identity

[8] This value is the adjusted R-square value since it takes into consideration the number of variables in the model. Partial residual plots were created for all independent variables in the equation as a means to test for normality of distribution. All plots revealed that no normality assumptions were violated.

Conclusions and Recommendations

This study confirms existing knowledge in regards to the often unrealistic occupational and educational aspirations held by American adolescents. The job opportunities which are likely to be available to them, and an occupational structure in which more jobs require less than a BS degree, do not match their expressed interests. It must be noted that several limitations affect the interpretation of the data from this study. First, the use of census data instead of a random sample and a relatively small population reduce the generalizability of the findings. Secondly, the participating school district is located in a very homogeneous community which eliminated the selection of race, a known important factor in identity formation and job mobility potential, as an independent variable. In addition, there are some known limitations with the use of self-reported data. Even with these limitations, however, sound conclusions and recommendations can be made based on the data analysis:

More students in the study are presently enrolled in the college preparatory curriculum of the local high school than are likely to go to college. As a consequence, the students who participated in this study are not likely, overall, to meet their educational and, as a consequence, their occupational goals. Based on prior discussions which focused on parents' occupations, students, if they remain in the area, are likely to be underemployed. This is not only due to the reality of the job market, but also their ideal job choices.

The participating students have inadequate information about the salary structure of the labor market. Even though the majority of them have chosen professional jobs as their ideal, the expected salaries are much higher than what is the norm for Pennsylvania communities.

Female students in the area are not socialized to limitations of their occupational goals based on considerations of marriage and children. There is less identification with traditional female occupations for the females participating in this study as compared to the norm 25-30 years ago (Super & Bohn, 1970).

Children from advantaged backgrounds, as evidenced by fathers' occupations of higher status are more likely to aspire to higher status jobs than children from disadvantaged homes. Students also evaluate, differentially, influences on ideal jobs based on their source of gratification, specifically, knowing about a job and its potential for opportunities. Individuals with an orientation towards a job and its rewards are more likely to select higher status ideal jobs than persons who do not value those things as much.

Academically talented students are more likely to select higher status ideal jobs than students who earn lower average grades. Much of this is out of the control of the individual since IQ is not something developed consciously.

However, IQ is not necessarily a precursor to achievement which is influenced by many environmental factors.

Having choices in decision-making and the ability to arrive at answers to problems are keys to maximizing individual and collective human potential. Decision-making and problem solving should ideally be processes which include an evaluation of facts rather than tradition, bias, and prejudice. For young people, the decision-making process is crucial as they make educational and other choices, particularly those involved with choosing an occupation and/or a career. Appropriate decisions made prior to entry into the labor market help ensure that adolescents' and teens' chosen work roles will more closely match careful assessments of interests, abilities, and labor market needs. Each student must be provided with opportunities for self-discovery of his/her talents, and with appropriate instruction and activities to relate those talents to the world of work.

Based on the data analysis, consideration should be given to the following recommendations:

Job awareness and exploration are important beginnings of the workforce preparation process; it is, therefore, recommended that they occur at an earlier age and simultaneously over a longer period of time. Adolescents tend to make early commitments to choices (Harter, 1990)—choices which involve education and other forms of "tracking," and impact on the future in ways unimagined. Poor decisions at an early age result in "settling for" less than would be otherwise, a functional adaptation to the set of limiting conditions created as a result of the decision-making process.

Data on labor market trends, as published by the national and state departments of labor and industry, should be provided to all students. The data should be provided as part of regular, planned courses of study, and not just as available resource material, with activities focused on reading and evaluation of county and local labor market data. Development of skills related to setting short-term, incremental, and achievable goals, based on implications derived from the labor market data, should be a primary objective of this coursework. Ideally, these activities should be integrated into existing program offerings.

Students should be required to investigate job opportunities and descriptions in all the major categories of the jobs hierarchy which would include an analysis of the following job characteristics or requirements: 1) initial education and training, 2) typical time and other related commitments such as continuing education, travel, overtime, and weekend work, 3) physical demands to include manual labor and emotional/mental stress, 4) technical and manipulative skills aptitudes, 5) levels of social interaction, 6) existing salary structure, 7) opportunities for advancement, and 8) performance evaluation measures. It is also critical to determine locations of availability for the jobs investigated—few

students in the study could identify a firm, agency, or other location at which they might pursue their ideal jobs.

Individualized measures of interest and aptitude should be part of an ongoing process as students engage in experiential activities exploring various job and career opportunities. Students should be taught how to critically evaluate themselves in terms of how they may "match" specific occupations currently under exploration. A "Career Development Portfolio" would be a most appropriate vehicle for maintaining this information, to be revised on a regular basis.

Career education programs that do not contain compensatory education components may not achieve their goals. It is recommended that steps be taken to identify individual barriers to accessing and processing of information in an effort to compensate for selectivity of information delivery such as that which results from socioeconomic condition. Some compensatory education components may be provided through interagency collaboration, and should focus enhancing the social interaction skills of participants as well as provide knowledge—the use of simulated work teams can be one way to integrate workplace skills with social skills.

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